

**Topic: Charmless hadronic 3-body B decays**

**Proponent:** Eli Ben-Haim

**Purpose:**

Three- and four-body decays of heavy mesons have been extensively studied with a twofold motivation: an alternative tool for the understanding the QCD spectrum; a primary source for CPV measurements. The large data sets collected by LHCb bring along the need of a refinement of methods and tools, requiring a better theoretical foundation of the decay amplitude models.

The aim of the workshop is to discuss key issues common to most amplitude analysis. Some examples are:

- how to incorporate the theoretical and experimental progress in the knowledge of two-body systems into a multi-body environment;
- how to apply symmetry principles, such as isospin and SU(3), and fundamental principles, such as unitarity, analyticity and CPT conservation, to constrain/relate decay amplitudes;
- how to explore the connection between the quark and hadron degrees of freedom to build sound parameterizations of nonresonant amplitudes.

The presentations will cover recent LHCb results, ongoing analyses and related theoretical issues

**Expected date:** April-May 2018 (second part of April seems now as the most probably period)

**Duration:** 3 half days over 2 days + a whole day for specific discussions for the B->Kshh' analysis, with colleagues from Clermont-Ferrand, Warwick, Valencia, Zurich and Bogota

**Location:** LPNHE-Paris (amphi Charpak)